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1 [Fast detection of communication patterns in distributed executions](#)

Thomas Kunz, Michiel F. H. Seuren

November 1997

Proceedings of the 1997 conference of the Centre for Advanced Studies on C

Full text available: [pdf\(4.21 MB\)](#)

Additional Information: [full citation](#), [ab](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on process-time d we use is Poet, an event tracer developed at the University of Waterloo. However, these diagrams are often tools display repeated occurrences of non-trivial commun ...

2 [System architectures for computer music](#)

John W. Gordon

June 1985

ACM Computing Surveys (CSUR), Volume 17 Issue 2

Full text available: [pdf\(4.61 MB\)](#)

Additional Information: [full citation](#), [ab](#)

Computer music is a relatively new field. While a large proportion of the public is aware of computer music terms of synthesis, performance, and recording hardware. This article addresses that need by surveying an system will be used for. Common uses for co ...

3 [SpeechSkimmer: a system for interactively skimming recorded speech](#)

Barry Arons

March 1997

ACM Transactions on Computer-Human Interaction (TOCHI), Volume 4 Issue 1

Full text available: [pdf\(1.03 MB\)](#)

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Listening to a speech recording is much more difficult than visually scanning a document because of the tra browse the stored information. This article describes techniques for structuring, filtering, and presenting rec describes the SpeechSkimmer system for interacti ...

Keywords: audio browsing, interactive listening, nonspeech audio, speech as data, speech skimming, spee

4 [Pipeline Architecture](#)

C. V. Ramamoorthy, H. F. Li

January 1977 **ACM Computing Surveys (CSUR)**, Volume 9 Issue 1

Full text available: [pdf\(3.53 MB\)](#)

Additional Information: [full citation](#), [references](#), [citings](#), [index terms](#)

5 [System-level power optimization: techniques and tools](#)

Luca Benini, Giovanni de Micheli

April 2000

ACM Transactions on Design Automation of Electronic Systems (TODAES), Vo

Full text available: [pdf\(385.22 KB\)](#)

Additional Information: [full citation](#), [ab](#)

This tutorial surveys design methods for energy-efficient system-level design. We consider electronic system that consume energy, namely computation, communication, and storage units, and we review methods of r for energy-efficient software design and compilation. This survey ...

- 6 Denial-of-service: Low-rate TCP-targeted denial of service attacks: the shrew vs. the mice and elephant
Aleksandar Kuzmanovic, Edward W. Knightly
August 2003 **Proceedings of the 2003 conference on Applications, technologies, architectures**

Full text available:  [pdf\(214.09 KB\)](#)

Additional Information: [full citation](#), [abstract](#)

Denial of Service attacks are presenting an increasing threat to the global inter-networking infrastructure. With end-system cooperation results in a well-known vulnerability to attack by high-rate non-responsive flows. I for routers and counter-DoS mechanisms ...

Keywords: TCP, denial of service, retransmission timeout


- 7 Ultracomputers: a teraflop before its time
Gordon Bell
August 1992 **Communications of the ACM**, Volume 35 Issue 8

Full text available:  [pdf\(11.84 MB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#), [review](#)

Keywords: government policy, parallel processing, scientific programming

- 8 RAID: high-performance, reliable secondary storage
Peter M. Chen, Edward K. Lee, Garth A. Gibson, Randy H. Katz, David A. Patterson
June 1994 **ACM Computing Surveys (CSUR)**, Volume 26 Issue 2


Full text available:  [pdf\(3.60 MB\)](#)

Additional Information: [full citation](#), [abstract](#)

Disk arrays were proposed in the 1980s as a way to use parallelism between multiple disks to improve aggregate performance. This paper gives a comprehensive overview of disk arrays and provides a framework in which to organize current and future research on arrays: performance and reliability. It discusses the two ...

Keywords: RAID, disk array, parallel I/O, redundancy, storage, striping


- 9 Network measurement of the VMTP request-response protocol in the V distributed system
David R. Cheriton, Carey L. Williamson
May 1987 **ACM SIGMETRICS Performance Evaluation Review , Proceedings of the 1987**

Full text available:  [pdf\(1.32 MB\)](#)

Additional Information: [full citation](#), [abstract](#)

Communication systems are undergoing a change in use from stream to request-response or transaction oriented channels. These changes call for a new generation of networks, network interfaces, and transport protocols. This paper should guide the design of this new generation ...

- 10 Process migration
September 2000 **ACM Computing Surveys (CSUR)**, Volume 32 Issue 3

Full text available:  [pdf\(1.24 MB\)](#)

Additional Information: [full citation](#), [abstract](#)


Process migration is the act of transferring a process between two machines. It enables dynamic load distribution. While research efforts, migration has not achieved widespread use. With the increasing deployment of distributed systems, attention in both research and product development. As hi ...

Keywords: distributed operating systems, distributed systems, load distribution, process migration

- 11 Combining the concepts of compression and caching for a two-level filesystem
Vincent Cate, Thomas Gross

April 1991

Proceedings of the fourth international conference on Architectural support for

Full text available:  pdf(1.10 MB)


Additional Information: [full citation](#), [references](#), [...](#)

12 I/O reference behavior of production database workloads and the TPC benchmarks—an analysis at t

Windsor W. Hsu, Alan Jay Smith, Honesty C. Young

March 2001

ACM Transactions on Database Systems (TODS), Volume 26 Issue 1

Full text available:  pdf(5.42 MB)

Additional Information: [full citation](#), [ab](#)

As improvements in processor performance continue to far outpace improvements in storage performance, amounts of data. The key to achieving good I/O performance is to thoroughly understand its characteristics production database workloads from ten of the world's largest corporatio ...

Keywords: I/O, TPC benchmarks, caching, locality, prefetching, production database workloads, reference

13 The evaluation of text editors: methodology and empirical results.

Teresa L. Roberts, Thomas P. Moran

April 1983

Communications of the ACM, Volume 26 Issue 4

Full text available:  pdf(2.24 MB)

Additional Information: [full citation](#), [ab](#)

This paper presents a methodology for evaluating text editors on several dimensions: the time it takes expe learn to perform basic editing tasks, and the functionality of editors over more complex tasks. Time, errors, analytically. The methodology has thus far been u ...

Keywords: ergonomics, human factors, human-computer interaction, human-computer interface, system d

14 Compiler transformations for high-performance computing

David F. Bacon, Susan L. Graham, Oliver J. Sharp

December 1994

ACM Computing Surveys (CSUR), Volume 26 Issue 4

Full text available:  pdf(6.32 MB)

Additional Information: [full citation](#), [ab](#)

In the last three decades a large number of compiler transformations for optimizing programs have been im transformations based on the analysis of scalar quantities and data-flow techniques. In contrast, optimizatio with transformations that rely on tracking the properties o ...

Keywords: compilation, dependence analysis, locality, multiprocessors, optimization, parallelism, supersca

15 Congestion: Best-path vs. multi-path overlay routing

David G. Andersen, Alex C. Snoeren, Hari Balakrishnan

October 2003

Proceedings of the 2003 ACM SIGCOMM conference on Internet measuremen

Full text available:  pdf(142.64 KB)

Additional Information: [full citation](#), [ab](#)

Time-varying congestion on Internet paths and failures due to software, hardware, and configuration errors between two network locations. These approaches rely on a path-independence assumption in order to wor time. This paper examines the extent to which this assumption holds on the In ...

Keywords: measurement, multi-path routing, networking, overlay networks

16 Continuous profiling: where have all the cycles gone?

Jennifer M. Anderson, Lance M. Berc, Jeffrey Dean, Sanjay Ghemawat, Monika R. Henzinger, Shun-Tak A. Leu

November 1997

ACM Transactions on Computer Systems (TOCS), Volume 15 Issue 4

Full text available:  pdf(259.35 KB)

Additional Information: [full citation](#), [ab](#)


This article describes the Digital Continuous Profiling Infrastructure, a sampling-based profiling system desi executables, and collects profiles for entire systems, including user programs, shared libraries, and the ope with low overhead (1–3% slowdown for most workloads). A ...

Keywords: performance understanding, performance-monitoring hardware, profiling, program analysis

17 End-to-end Internet packet dynamics

Vern Paxson
October 1997

**ACM SIGCOMM Computer Communication Review , Proceedings of the ACM S
communication**, Volume 27 Issue 4

Full text available:  pdf(2.34 MB)


Additional Information: [full citation](#), [ab](#)

We discuss findings from a large-scale study of Internet packet dynamics conducted by tracing 20,000 TCP receiver, the measurements allow us to distinguish between the end-to-end behaviors due to the different network events such as out-of-order delivery and packet corruption; di ...

18 Level II technical support in a distributed computing environment

Tim Leehane
September 1996

Proceedings of the 24th annual ACM SIGUCCS conference on User services

Full text available:  pdf(5.73 MB)

Additional Information: [full citation](#), [references](#), [index terms](#)

19 Vector architectures: past, present and future

Roger Espasa, Mateo Valero, James E. Smith
July 1998

Proceedings of the 12th international conference on Supercomputing

Full text available:  pdf(1.17 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

20 Memory contention for shared memory vector multiprocessors

R. W. Numrich
December 1992

Proceedings of the 1992 ACM/IEEE conference on Supercomputing

Full text available:  pdf(787.75 KB)

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